

WHAT IS CLAIMED IS:

1. A method for treating an illness in a patient comprising administering to said patient an effective amount of propionoyloxymethyl propionate, butyroxymethyl butyrate, or mixtures thereof.
2. The method of Claim 1, wherein said compound is contained in a pharmaceutically acceptable carrier.
3. The method of Claim 1, wherein said illness is cancer, hemological disease or an inherited metabolic disease.
4. The method of Claim 1, wherein said treatment results in one or more therapeutic benefits selected from the group consisting of retarding or eliminating tumor growth, inducing apoptosis of tumor cells, healing wounds, healing cutaneous ulcers, ameliorating gastrointestinal disorders, modulating gene expression, inhibiting telomerase activity, inducing tolerance to antigens, preventing or ameliorating protozoan infection, inhibiting histone deacetylase in cells, modulating an immune response, ameliorating the effects of a cytotoxic agent, stimulating hematopoietic cells *ex vivo* and protecting against injury to hair follicles.
5. The method of Claim 1, wherein said effective amount is at least about 10 milligrams per meter² of body mass, per day.
6. The method of Claim 1, wherein said compound is administered orally, parenterally, transdermally, transmucosally, intranasally, rectally or topically.
7. The method of Claim 1, wherein said effective amount is an amount sufficient to effect a therapeutic benefit.